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10/026,758	12/27/2001	Gregg A. McClelland	8350.1647-00	9791

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EXAMINER

BRAUTIGAM, ALYSA N

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,758

Applicant(s)

MCCLELLAND ET AL.

Examiner

Alysa N. Brautigam

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>27 December 2001</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

- Paragraph 22, line 1: "an method" should be "a method"
- Paragraph 23, line 6: "feature" should be "features"

Appropriate correction is required.

### ***Claim Objections***

2. Claim 4 is objected to because of the following informalities: Line 3 refers to "the schematic" where there are multiple variations of the schematic, i.e., electronic schematic, colorized schematic, revised electronic schematic, etc. For clarity, the language should be amended to specify exactly which schematic is being referred to. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (5,883,813).

5. In regards to claim 1, Kim discloses a method of colorizing an electronic schematic including at least one feature (column 3, lines 18-20) comprising the steps of:

- identifying a set of features associated with the electronic schematic to be colorized (column 4, lines 57-58 disclose the features [data structures] including nets and the elements within them; see also Figs 3-7 for examples);
- establishing a color scheme, wherein the color scheme includes a color associated with at least one of the features (column 5, lines 18-19 discloses the color scheme as a color and its opposite and the assignment of the colors to the features); and
- automatically colorizing the feature based on the color scheme (Abstract; column 3, lines 17-20).

6. In regards to claim 2, Kim discloses the method of claim 1, as contained hereinabove. In addition, Kim discloses wherein each feature includes one or more elements (Figs 3-7 disclose examples of the nets and the elements within them; column 4, lines 57-60 disclose the input of data structures including "flat data structures" and "hierarchical data structures"), and wherein the step of automatically colorizing the feature includes:

- associating an element with one of the features (Figures 3-7 disclose the nets and their elements; column 5, lines 37-41, 46-50 and column 5, line 65 through column 6, line 6); and

- automatically coloring the element based on the color scheme (column 3, lines 17-20; column 9, lines 13-16).

7. In regards to claim 3, Kim discloses the method of claim 1, as contained hereinabove. In addition, Kim further discloses storing the colorized schematic in an electronic format (column 10, lines 22-28).

8. In regards to claim 4, Kim discloses the method of claim 3, as contained hereinabove. In addition, Kim further discloses:

- obtaining a revised electronic schematic (column 10, lines 22-28 disclose the storage of the schematic; column 5, lines 59-61 disclose the obtaining of the revised schematic data);
- comparing the schematic to the revised electronic schematic to determine revised portions and non-revised portions of the revised electronic schematic (Figure 1; column 5, line 59 through column 6, line 12 disclose the comparison of the schematic data to determine the revised and un-revised portions);
- coloring the non-revised portions based on the stored colorized schematic (Figure 1; column 6, lines 7-10 disclose wherein the non-revised portions are colorized based on the colorization of the revised portion) ;
- associating an element from the revised portions with one of the features (column 5, line 59 through column 6, line 27 where the net is the feature with which the elements are associated); and

- automatically colorizing the element based on the color scheme (Abstract; column 3, lines 17-20; column 9, lines 13-16).

9. In regards to claim 5, Kim discloses the method of claim 2, as contained hereinabove. In addition, Kim further discloses wherein the step of associating an element with one of the features includes:

- selecting a feature (Figure 1; column 5, line 59 through column 6, line 27 provides an example of the process including the selection of a features, i.e., “the net the shapes belong to” or the “new net” to which the elements will belong); and
- selecting at least one element on the schematic to be associated with the selected feature (Figure 1; column 5, line 59 through column 6, line 27 provides an example of the process including the selection of elements including at least one new element).

10. In regards to claim 6, Kim discloses the method of claim 5, wherein the step of selecting at least one element on the schematic includes selecting at least one element in a visual representation of the schematic (Figure 3 and column 6, line 63 through column 7, line 3 disclose the method as applied to a CAD system which provides a visual representation of the schematic).

11. In regards to claim 7, Kim discloses the method of claim 5, wherein the step of selecting at least one element on the schematic includes entering one or more labels associated with the elements (Figure 1 discloses the input [entering] of the CAD design data which would include one or more labels associated with the elements).

12. In regards to claim 8, Kim discloses a computer-readable medium including instructions for performing a method of colorizing an electronic schematic (column 4, lines 41-42 discloses the method as used in a CAD program where a computer program inherently exists on a computer-readable medium; column 3, lines 18-20) including at least one feature comprising the steps of:

- identifying a set of features on the schematic to be colorized (column 4, lines 57-58 disclose the features [data structures] including nets and the elements within them; see also Figs 3-7 for examples);
- establishing a color scheme, wherein the color scheme includes a color associated at least one of the features (column 5, lines 18-19 discloses the color scheme as a color and its opposite and the assignment of the colors to the features); and
- automatically colorizing the feature based on the color scheme (Abstract; column 3, lines 17-20).

13. In regards to claim 9, Kim discloses the computer readable medium of claim 8, wherein each feature includes one or more elements (Figs 3-7 disclose examples of the nets and the elements within them; column 4, lines 57-60 disclose the input of data structures including “flat data structures” and “hierarchical data structures”), and wherein the step of automatically colorizing the feature includes:

- associating an element with one of the features (Figures 3-7 disclose the nets and their elements; column 5, lines 37-41, 46-50 and column 5, line 65 through column 6, line 6); and

- automatically colorizing the element based on the color scheme (column 3, lines 17-20; column 9, lines 13-16).

14. In regards to claim 10, Kim discloses the computer readable medium of claim 8, as contained hereinabove. In addition, Kim further discloses storing the colorized schematic in an electronic format (column 10, lines 22-28).

15. In regards to claim 11, Kim discloses the computer readable medium of claim 10, as contained hereinabove. In addition, Kim further discloses:

- obtaining a revised electronic schematic (column 10, lines 22-28 disclose the storage of the schematic; column 5, lines 59-61 disclose the obtaining of the revised schematic data);
- comparing the schematic to the revised electronic schematic to determine revised portions and non-revised portions of the revised electronic schematic (Figure 1; column 5, line 59 through column 6, line 12 disclose the comparison of the schematic data to determine the revised and un-revised portions);
- colorizing the non-revised portions based on the stored colorized schematic (Figure 1; column 6, lines 7-10 disclose wherein the non-revised portions are colorized based on the colorization of the revised portion);
- associating an element from the revised portions with one of the features (column 5, line 59 through column 6, line 27 where the net is the feature with which the elements are associated); and



- automatically colorizing the element based on the color scheme (Abstract; column 3, lines 17-20; column 9, lines 13-16).

16. In regards to claim 12, Kim discloses the computer readable medium of claim 9, as contained hereinabove. In addition, Kim further discloses wherein the step of associating an element with one the features includes:

- selecting a feature (Figure 1; column 5, line 59 through column 6, line 27 provides an example of the process including the selection of a features, i.e., "the net the shapes belong to" or the "new net" to which the elements will belong); and
- selecting at least one element on the schematic to be associated with the selected feature (Figure 1; column 5, line 59 through column 6, line 27 provides an example of the process including the selection of elements including at least one new element).

17. In regards to claim 13, Kim discloses the computer readable medium of claim 12, wherein the step of selecting at least one element on the schematic includes selecting at least one element in a visual representation of the schematic (Figure 3 and column 6, line 63 through column 7, line 3 disclose the method as applied to a CAD system which provides a visual representation of the schematic).

18. In regards to claim 14, Kim discloses the computer readable medium of claim 12, wherein the step of selecting at least one element on the schematic includes entering one or more labels associated with the elements (Figure 1 discloses the input [entering]

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of the CAD design data which would include one or more labels associated with the elements).

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (5,883,813) in view of Maeda et al. (5,966,310).

21. In regards to claim 15, Kim discloses a system configured to colorize an electronic schematic including a set of features, as disclosed hereinabove in regards to claim 1. While Kim discloses the system for colorizing an electronic schematic and indicates the system is manifested in a computing environment, Kim does not specifically disclose the system components. Maeda discloses a computer aided design system, the system comprising:

- a processor (column 13, lines 29-30 disclose the invention embodied on a personal computer where it is inherent that a computer has a processor);  
and
- a memory wherein the memory includes a colorization module configured to colorize the electronic schematic (column 2, lines 63-65 disclose the memory as having; column 2, lines 44-47 disclose the graphics processing

means which is equivalent to the "colorization module" disclosed by applicant as they are both software modules designed to colorize the schematic or design).

It would have been obvious to one skilled in the art to which it pertains at the time the invention was made to integrate the teachings of Kim and Maeda to achieve a system and method for utilizing a computer aided drafting software package to colorize an electronic or other design schematic in order to make the schematic more easily manipulated and viewable by a generic user.

22. In regards to claim 16, the combination of Kim and Maeda disclose the system of claim 15, wherein the memory further includes a computer-aided design module configured to prepare the electronic schematic (Maeda: column 8, lines 54-55; column 9, lines 34-38).

23. In regards to claim 17, the combination of Kim and Maeda disclose the system of claim 16, wherein the colorization module is software configured to work with the computer-aided design module during colorization of the electronic schematic (column 9, lines 34-38 disclose the CAD module configures to work with the colorization module [graphics module]).

24. In regards to claim 18, the combination of Kim and Maeda disclose the system of claim 16, further including an output module for providing the colorized schematic to one or more of a display device, a printer, or a storage medium (Maeda: column 9, lines 39-40).

25. In regards to claim 19, the combination of Kim and Maeda disclose the system of claim 16, further including an input module for receiving inputs from one or more of a keyboard, a point-and-click device, or a storage medium reader (Maeda: column 8, lines 58-62 disclose various input devices).

26. In regards to claim 20, the combination of Kim and Maeda disclose the system of claim 16, wherein the colorization module is configured to enable the processor to perform the following steps:

- identify a set of features on the original electronic schematic to be colorized (Kim: column 4, lines 57-58 disclose the features [data structures] including nets and the elements within them; see also Figs 3-7 for examples);
- establish a color scheme, wherein the color scheme includes a color associated with at least one of the features (Kim: column 5, lines 18-19 discloses the color scheme as a color and its opposite and the assignment of the colors to the features);
- associate an element with one of the features (Kim: Figures 3-7 disclose the nets and their elements; column 5, lines 37-41, 46-50 and column 5, line 65 through column 6, line 6); and
- automatically colorize the element based on the color scheme automatically colorizing the feature based on the color scheme (Kim: Abstract; column 3, lines 17-20).

It would have been obvious to one skilled in the art to which it pertains at the time the invention was made to integrate the teachings of Kim and Maeda to achieve a system and method for utilizing a computer aided drafting software package to colorize an electronic or other design schematic in order to make the schematic more easily manipulated and viewable by a generic user.

27. In regards to claim 21, the combination of Kim and Maeda disclose the system of claim 17, wherein the colorization module is further configured to instruct the processor to further perform the following steps:

- store the colorized schematic in an electronic format (column 10, lines 22-28);
- obtain a revised electronic schematic (Kim: column 10, lines 22-28 disclose the storage of the schematic; column 5, lines 59-61 disclose the obtaining of the revised schematic data);
- compare the electronic schematic to the revised electronic schematic determine revised portions and non-revised portions of the revised electronic schematic (Figure 1; column 5, line 59 through column 6, line 12 disclose the comparison of the schematic data to determine the revised and un-revised portions);
- colorize the non-revised portions based on the stored colorized schematic (Kim: Figure 1; column 6, lines 7-10 disclose wherein the non-revised portions are colorized based on the colorization of the revised portion);

- associate an element from the revised portions with one of the features (Kim: column 5, line 59 through column 6, line 27 where the net is the feature with which the elements are associated); and
- automatically colorize the element based on the color scheme (Kim: Abstract; column 3, lines 17-20; column 9, lines 13-16).

28. In regards to claim 22, Kim discloses a system configured to colorize an electronic schematic including a set of features, as disclosed hereinabove in regards to claim 1. While Kim discloses the system for colorizing an electronic schematic and indicates the system is manifested in a computing environment, Kim does not specifically disclose the system components. Maeda discloses a computer aided design system, the system comprising:

- a colorization module for colorizing the original electronic schematic (column 2, lines 63-65 disclose the memory as having; column 2, lines 44-47 disclose the graphics processing means which is equivalent to the "colorization module" disclosed by applicant as they are both software modules designed to colorize the schematic or design), wherein the colorization module is configured to perform the following steps:
- identify a set of features on the electronic schematic to be colorized (Kim: column 4, lines 57-58 disclose the features [data structures] including nets and the elements within them; see also Figs 3-7 for examples);
- establish a color scheme, wherein the color scheme includes a color associated with each of the features (Kim: column 5, lines 18-19 discloses

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the color scheme as a color and its opposite and the assignment of the colors to the features); and

- automatically colorize the feature based on the color scheme (Kim: Abstract; column 3, lines 17-20).

It would have been obvious to one skilled in the art to which it pertains at the time the invention was made to integrate the teachings of Kim and Maeda to achieve a system and method for utilizing a computer aided drafting software package to colorize an electronic or other design schematic in order to make the schematic more easily manipulated and viewable by a generic user.

29. In regards to claim 23, the combination of Kim and Maeda disclose the system of claim 22, wherein each feature includes one or more elements, and wherein the step of automatically colorizing the feature includes:

- associating an element with one of the features (Kim: Figures 3-7 disclose the nets and their elements; column 5, lines 37-41, 46-50 and column 5, line 65 through column 6, line 6); and
- automatically colorizing the element based on the color scheme (Kim: Abstract; column 3, lines 17-20).

30. In regards to claim 24, the combination of Kim and Maeda disclose the system of claim 22, wherein the colorization module is further configured to perform the following steps:

- store the colorized schematic in an electronic format (Kim: column 10, lines 22-28);

- obtain a revised electronic schematic (Kim: column 10, lines 22-28 disclose the storage of the schematic; column 5, lines 59-61 disclose the obtaining of the revised schematic data);
- compare the electronic schematic to the revised electronic schematic to determine revised portions and non-revised portions of the revised electronic schematic (Figure 1; column 5, line 59 through column 6, line 12 disclose the comparison of the schematic data to determine the revised and un-revised portions);
- colorize the non-revised portions based on the stored colorized schematic (Kim: Figure 1; column 6, lines 7-10 disclose wherein the non-revised portions are colorized based on the colorization of the revised portion);
- associate an element from the revised portions with one of the features (Kim: column 5, line 59 through column 6, line 27 where the net is the feature with which the elements are associated); and
- automatically colorize the element based on the color scheme (Kim: Abstract; column 3, lines 17-20; column 9, lines 13-16).

### ***Conclusion***

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ueno et al. (6,853,388) discloses a network management equipment and communication path setting method wherein a graphics map of a system is displayed and the display colors are set/reset according to prescribed conditions.



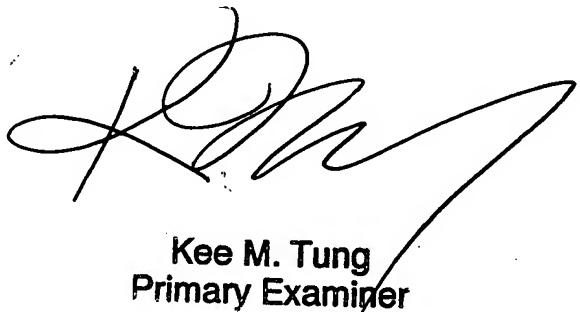
Lipton et al. (6,799,307) discloses a layout versus schematic comparison tools that compares an integrated circuit schematic and an integrated circuit layout and both colors and recolors the schematics.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alysa N. Brautigam whose telephone number is 703-305-8631. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

anb



**Kee M. Tung**  
**Primary Examiner**